QUARTERLY SUMMARY

OF THE

IMPROVEMENTS AND DISCOVERIES

IN THE

MEDICAL SCIENCES.

ANATOMY AND PHYSIOLOGY.

Communication between the Aorta and Pulmonary Artery.

At a meeting of the Berlin Medical Society, in March, Dr. B. BAGINSKY exhibited a heart and large vessels, in which there was a direct communication between the aorta and pulmonary artery, the ductus arteriosus being obliterated. He had shown it to Professor Virchow, who was unable to remember having seen anything similar; nor was a similar malformation depicted by Rokitansky in his Atlas of defects of the cardiac septum. The specimen was taken from a boy aged 4, who had been under Dr. Baginsky's observation almost from birth. When eight days old, the child had symptoms of bronchial catarrh; it had an aphonic hoarse cough, but there was not much dyspnœa. In a few days, Dr. Baginsky examined the heart, and found at various points a large number of systolic and diastolic murmurs, with resistant dulness over the right ventricle, and rather irregular action of the heart. The pulse was irregular. Dr. Baginsky came to the conclusion that there was a malformation of the heart, but of what kind he could not determine. In the course of the succeeding four years, the child had numerous attacks of bronchial catarrh; it grew normally, however, and was strong, but pigeon-breasted. Last year it had nephritis, probably of scarlatinal origin, followed by hæmaturia and afterwards by suppression of urine. In December, symptoms resembling hooping-cough appeared. Convulsions of the whole body took place repeatedly, and the child died. Dr. Baginsky examined the body. The heart weighed 250 *grammes* (about 8¾ ounces), and was 12½ *centimeters* (nearly 5 inches) in width. There was considerable hypertrophy of the right ventricle, the wall being 1.4 *millimetres* thick. The left ventricle was less hypertrophied, but was much dilated. The semilunar valves on both sides were normal. The musculi papillares of the auriculo-ventricular valves were atrophied. The ductus arteriosus was normally obliterated. Between the aorta and the pulmonary artery, there was a communication, about a *centimeter* in extent, with a thickened and indurated edge. The opening was nearly triangular, and its base was on a level with the upper free edge of the posterior semilunar valve of the pulmonary artery, and about half a *centimeter* above the free edge of the aortic valves. Professor Virchow was of opinion that the hypertrophy of the right ventricle was probably congenital, and that the dilatation of the left ventricle had taken place after birth. There was parenchymatous nephritis on both sides. The remaining organs were normal.—*British Med. Journal*, Nov. 1, 1879.

On the Development of the Coloured Blood-Corpuscles.

In regard to the development of the red blood-corpuscles, the study of comparative anatomy brings HAYEM to the following conclusions (*Archives de Physiologie*, 1879, p. 201). The blood of vertebrates contains constantly a large number of particular elements which undergo great modifications, so that when they escape from the bloodvessels they run together to form a fibrous network. These elements possess, then, qualities totally different from those of the white cells (which remain always independent of that meshwork), qualities which correspond to special histological and histo-chemical characters. Between the largest and smallest of these elements there are always to be found intermediate specimens, which show that we have to do merely with one and the same element in the course of evolution. In the course of development these elements lose their primary characteristics and assume those of the red blood-disk. In spite of the two different types under which the red corpuscles present themselves (nucleated and non-nucleated), the evolution which these elements undergo is the same in all vertebrate animals. In all cases they commence by being hæmatoblasts, nucleated or non-nucleated, of which the general physiological properties are the same in all classes. Under certain conditions the intermediate forms become very abundant, as, for example, when the animals have been subjected to considerable hemorrhage, to which succeeds a phase of regeneration of blood.—*Lond. Med. Record*, Nov. 15, 1879.

MATERIA MEDICA AND THERAPEUTICS.

On Benzoate of Soda.

At the meeting of the Znaim Association of Physicians in Mähr-Budwitz, Dr. ULLMANN read a paper on new remedies, in which he states (*Allegemeine Med. Chirurg. Zeitung*, 1879): "Benzoate of soda was recommended by Prof. Klebs for all infectious diseases created by vegetable parasites. Letzerich especially praised benzoate of soda as a remedy for diphtheria, but experiments with it in Vienna have not proved successful, etc." If we now investigate the series of experiments by Dr. Gründinger, we find that the patients were taken to the Children's Hospital of Dr. Wiederhofer, of Vienna, from two to five days after they were affected. We further observe, that in the children who died, transmitted exudations, acute morbus Brightii, hemorrhages of the peritoneum, pronounced increase of the lungs, bronchiectasis, bronchitis, atelectasis, florid rachitis, etc., were found; that, therefore, in some of them serious secondary phenomena, and in others, either constitutional diseases or other affections existed, by which the capability of resisting the diphtheritic process had been considerably reduced. The majority of those who died were badly nourished and weak. It is obvious that, under such conditions, even the best and most careful treatment, as well as the best and safest method, cannot command great success. Benzoate of soda, although very effective, has therefore, been tried under very unfavourable conditions. He maintains, however, that benzoate of soda has, of all remedies hitherto known, the most favourable therapeutic influence on the diphtheritic process,